Malarkey Roofing Products® Defining Excellence.™

Safety Data Sheet
acc. to OSHA HCS

Printing date 09/26/2018 Reviewed on 09/25/2018

* 1 PRODUCT AND COMPANY IDENTIFICATION

· **Product identifier**

· **Trade name: EZ Seal Metal Primer**

· **Article number:** 752-1
· **Application of the substance / the mixture:** Priming

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Malarkey Roofing Products
3131 N. Columbia Blvd., Portland, OR USA 97217-7472
P.O. Box 17217, Portland, OR USA 97217-0217
Toll Free: +1-800-545-1191
Fax: +1-503-289-7644
www.malarkeyroofing.com

· **Technical contact:**
Matthew Felt, Technical Services Manager
Tel.: +1-503-283-1191
Email: mfelt@malarkeyroofing.com

· **Emergency telephone number:**
For Chemical Emergency
Spill Leak Fire Exposure or Accident
Call CHEMTREC Day or Night
DOMESTIC NORTH AMERICA 800-424-9300
INTERNATIONAL, CALL 703-527-3887 (collect calls accepted)

* 2 HAZARD(S) IDENTIFICATION

· **Classification of the substance or mixture**


GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.


GHS07

Eye Irrit. 2A H319 Causes serious eye irritation.
STOT SE 3 H336 May cause drowsiness or dizziness.

· **Label elements**
· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**


GHS02 GHS07

· **Signal word:** Danger

· **Hazard-determining components of labeling:**
2-methoxy-1-methylethyl acetate
ethyl acetate
· **Hazard statements:**
H225 Highly flammable liquid and vapor.
H319 Causes serious eye irritation.

(Contd. on page 2)

Malarkey Roofing Products® Defining Excellence.™

Safety Data Sheet
acc. to OSHA HCS

Printing date 09/26/2018 Reviewed on 09/25/2018

Trade name: EZ Seal Metal Primer

(Contd. of page 1)

H336 May cause drowsiness or dizziness.

· **Precautionary statements:**

P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P240	Ground/bond container and receiving equipment.
P280	Wear protective gloves/ eye protection.
P303+P361+P353	If on skin (or hair): Take off all contaminated clothing immediately. Rinse skin with water/shower.
P312	Call a poison center/doctor if you feel unwell.
P403+P235	Store in a well-ventilated place. Keep cool.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**

Health = 2
Fire = 3
Reactivity = 1

· **HMIS-ratings (scale 0 - 4)**

Health = 2
Fire = 3
Reactivity = 1

· **Other hazards:**

· **Results of PBT and vPvB assessment**

· **PBT:** Does not meet the PBT-criteria of Annex XIII of REACH (self assessment).

· **vPvB:** Does not meet the vPvB-criteria of Annex XIII of REACH (self assessment).

3 COMPOSITION / INFORMATION ON INGREDIENTS

· **Chemical characterization: Mixtures**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 108-65-6 Index number: 607-195-00-7	2-methoxy-1-methylethyl acetate	10-25%
CAS: 141-78-6 Index number: 607-022-00-5	ethyl acetate	10-25%
CAS: 13463-67-7	titanium dioxide	2.5-10%

4 FIRST-AID MEASURES

· **Description of first aid measures**

· **General information:**
Immediately remove any clothing soiled by the product.
Take affected persons out of the danger area and have them lay down.
Involve doctor immediately.

· **After inhalation:**
In case of unconsciousness, place patient on their side for transportation.
Take affected persons into fresh air and keep them calm and quiet.
Seek medical treatment.

· **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.

· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:** Do not induce vomiting; immediately call for medical help.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed**
Headache

(Contd. on page 3)

Malarkey Roofing Products® Defining Excellence.™

Safety Data Sheet
acc. to OSHA HCS

(Contd. of page 2)

Dizziness
Skin sensitization.
Irritant to skin, eyes and respiratory system.

5 FIRE-FIGHTING MEASURES

· **Extinguishing media**
· **Suitable extinguishing agents:** CO_2, sand, extinguishing powder, foam.
· **Special hazards arising from the substance or mixture**
Can form explosive gas-air mixtures.
Formation of toxic gases is possible during heating or in case of fire.
In case of fire, the following can be released:
Carbon monoxide (CO)
Nitrogen oxides (NOx)
· **Advice for firefighters**
· **Protective equipment:**
Wear fully protective suit.
Wear self-contained respiratory protective device.
· **Additional information**
Cool endangered receptacles with water spray.
Collect contaminated fire-fighting water separately. It must not enter the sewage system.

6 ACCIDENTAL RELEASE MEASURES

· **Personal precautions, protective equipment and emergency procedures:**
Ensure adequate ventilation.

Keep away from ignition sources

Use respiratory protective device against the effects of fumes/dust/aerosol.
Wear protective equipment. Keep unprotected persons away.
· **Environmental precautions:**
Do not allow to enter sewers/ surface or ground water.
Inform respective authorities in case of seepage into water course or sewage system.
Dilute with plenty of water.
· **Methods and material for containment and clean up:**
Do not flush with water or aqueous cleansing agents
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
· **Reference to other sections:**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
· **Protective Action Criteria for Chemicals**

· **PAC-1:**		
108-65-6	2-methoxy-1-methylethyl acetate	50 ppm
141-78-6	ethyl acetate	1,200 ppm
13463-67-7	titanium dioxide	30 mg/m³
112945-52-5	SYNTHETIC AMORPHOUS SILICA	18 mg/m³
1344-28-1	aluminium oxide	15 mg/m³
7631-86-9	silicon dioxide, chemically prepared	18 mg/m³
1314-23-4	zirconium oxide	14 mg/m³
70657-70-4	2-methoxypropyl acetate	50 ppm

(Contd. on page 4)

Malarkey Roofing Products® Defining Excellence.™

Safety Data Sheet
acc. to OSHA HCS

Printing date 09/26/2018 Reviewed on 09/25/2018

Trade name: EZ Seal Metal Primer

(Contd. of page 3)

· **PAC-2:**		
108-65-6	2-methoxy-1-methylethyl acetate	1,000 ppm
141-78-6	ethyl acetate	1,700 ppm
13463-67-7	titanium dioxide	330 mg/m³
112945-52-5	SYNTHETIC AMORPHOUS SILICA	100 mg/m³
1344-28-1	aluminium oxide	170 mg/m³
7631-86-9	silicon dioxide, chemically prepared	740 mg/m³
1314-23-4	zirconium oxide	110 mg/m³
70657-70-4	2-methoxypropyl acetate	1,000 ppm

· **PAC-3:**		
108-65-6	2-methoxy-1-methylethyl acetate	5000* ppm
141-78-6	ethyl acetate	10000** ppm
13463-67-7	titanium dioxide	2,000 mg/m³
112945-52-5	SYNTHETIC AMORPHOUS SILICA	630 mg/m³
1344-28-1	aluminium oxide	990 mg/m³
7631-86-9	silicon dioxide, chemically prepared	4,500 mg/m³
1314-23-4	zirconium oxide	680 mg/m³
70657-70-4	2-methoxypropyl acetate	5,000 ppm

7 HANDLING AND STORAGE

· **Handling:**
· **Precautions for safe handling:**
Cool down container when heated. Cool containers exposed to heat with water. Emergency cooling must be provided in the event of an ambient fire. Keep container tightly closed to prevent heat build-up (pressure increase). Avoid heat.
Do not refill residue into storage receptacles.
Ensure good ventilation/exhaustion at the workplace.
Provide at least 7-fold air changes per hour.
Prevent formation of aerosols.
· **Information about protection against explosions and fires:**
Highly volatile, flammable constituents are released during processing.
Keep ignition sources away - Do not smoke.
Fumes can combine with air to form an explosive mixture.
Only explosion-proof equipment.
Protect against electrostatic charges.
Protect from heat.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
Store only in the original receptacle.
Store in a cool location.
· **Information about storage in one common storage facility:**
Store away from oxidizing agents.
Store away from foodstuffs.
· **Further information about storage conditions:**
Store in cool, dry conditions in well-sealed receptacles.
Storage in a collecting room is required.
Store under lock and key and with access restricted to technical experts or their assistants only.
Max. storage temperature: 30°C
Keep receptacle tightly sealed.
Protect from heat and direct sunlight.

(Contd. on page 5)

Malarkey Roofing Products® Defining Excellence.™

Safety Data Sheet
acc. to OSHA HCS

Printing date 09/26/2018 Reviewed on 09/25/2018

Trade name: EZ Seal Metal Primer

(Contd. of page 4)

· **Specific end use(s)** Building coating or sealing.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
108-65-6 2-methoxy-1-methylethyl acetate (10-25%)	
WEEL	Long-term value: 50 ppm
141-78-6 ethyl acetate (10-25%)	
PEL	Long-term value: 1400 mg/m³, 400 ppm
REL	Long-term value: 1400 mg/m³, 400 ppm
TLV	Long-term value: 1440 mg/m³, 400 ppm
112945-52-5 SYNTHETIC AMORPHOUS SILICA (≤2.5%)	
OSHA PEL	Short-term value: 15 mg/m³ Long-term value: 5 mg/m³
TLV-TWA	Short-term value: 10 mg/m³ Long-term value: 3 mg/m³ ACGIH

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Avoid contact with the eyes and skin.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Keep away from foodstuffs, beverages and feed.
Avoid contact with the eyes.
· **Breathing equipment:**
Ensure good ventilation.
In case of brief exposure or low pollution, use a respiratory filter device. In case of intensive or longer exposure, use a respiratory protective device that is independent of circulating air.
· **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material should consider penetration times, rates of diffusion, and degradation.
Preventive skin protection by use of skin-protecting agents is recommended.
After use of gloves, apply skin-cleaning agents and skin cosmetics.
Check protective gloves prior to each use for their proper condition.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
· **Material of gloves:**
The selection of suitable gloves does not only depend on the material, but also on further marks of quality, and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has to be checked prior to application.
· **Penetration time of glove material:**
Our recommendation is mainly for one-time use as short-term protection against liquid splashes. For other applications, you should contact the glove manufacturer.
The exact break-through time has to be found out from the manufacturer of the protective gloves and must be observed.
· **For permanent contact in work areas without heightened risk of injury (e.g. Laboratory), gloves made of the following material are suitable:**
Butyl rubber, BR
· **For permanent contact, gloves made of the following materials are suitable:** Butyl rubber, BR

(Contd. on page 6)

Malarkey Roofing Products® Defining Excellence.™

Safety Data Sheet
acc. to OSHA HCS

Printing date 09/26/2018 Reviewed on 09/25/2018

Trade name: EZ Seal Metal Primer

(Contd. of page 5)

· **Not suitable are gloves made of the following materials:** Leather gloves
· **Eye protection:**

Tightly sealed goggles

· **Body protection:**

Protective work clothing

9 PHYSICAL AND CHEMICAL PROPERTIES

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Fluid
Color:	According to product specification
· **Odor:**	Fruit-like
· **Odor threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	77°C (170.6°F) (Ethylacetat)
· **Flash point:**	5°C (41°F) (EN ISO 3680)
· **Flammability (solid, gaseous):**	Not applicable.
· **Ignition temperature:**	315°C (599°F) (1-Methoxy-2-propylacetat)
· **Auto igniting:**	Product is not selfigniting.
· **Danger of explosion:**	Not determined.
· **Explosion limits:**	
Lower:	2.1 Vol % (Ethylacetat)
Upper:	11.5 Vol % (Etylacetat)
· **Vapor pressure at 20 °C (68 °F):**	4.9 hPa (3.7 mm Hg) (Ethylacetat)
· **Density at 20 °C (68 °F):**	1.51 g/cm³ (12.6 lbs/gal) (EN ISO 2811-1)
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with**	
Water:	Fully miscible.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic at 20 °C (68 °F):	2,000 mPas (EN ISO 2555)
· **Solvent content:**	
Organic solvents:	36.4 %
VOC content:	36.39 % 549.4 g/l / 4.59 lb/gal
Solids content:	64.0 %

(Contd. on page 7)

Malarkey Roofing Products® Defining Excellence.™

Safety Data Sheet
acc. to OSHA HCS

Printing date 09/26/2018 Reviewed on 09/25/2018

Trade name: EZ Seal Metal Primer

(Contd. of page 6)

· **Other information** No further relevant information available.

10 STABILITY AND REACTIVITY

· **Reactivity:** See Section 10.2.
· **Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
· **Possibility of hazardous reactions:**
Exothermic reaction.
Reacts with peroxides and other radical forming substances.
A hazardous polymerization may occur after exhaustion of the inhibitor.
· **Conditions to avoid** Avoid heat. Avoid direct sunlight.
· **Incompatible materials:** Reacts with peroxides and other reducing agents.
· **Hazardous decomposition products:**
No dangerous decomposition products when used according to specifications.
· **Additional information:**
Emergency procedures will vary depending on individual circumstances. The customer should have a contingency plan in place.

11 TOXICOLOGICAL INFORMATION

· **Information on toxicological effects:** There were no toxicological findings to the mixture.
· **Acute toxicity:**

· **LD/LC50 values relevant for classification:**

ATE (Acute Toxicity Estimate)		
Oral	LD50	30,221 mg/kg (rabbit)
Dermal	LC50	>21,825 mg/kg
Inhalative	LC50/4h	>51.4 mg/l (rat)

108-65-6 2-methoxy-1-methylethyl acetate		
Oral	LD50	8,500 mg/kg (rat)
Dermal	LC50	5,000 mg/kg (rat)
Inhalative	LC50/4h	35.7 mg/l (rat)

141-78-6 ethyl acetate		
Oral	LD50	4,934 mg/kg (rabbit) (OECD 401)
Dermal	LD50	>18,000 mg/kg (rabbit)
	LC50	>18,000 mg/kg (rat)
Inhalative	LC50/4h	56 mg/l (rat)

13463-67-7 titanium dioxide		
Oral	LD50	>20,000 mg/kg (rat)
Dermal	LC50	>10,000 mg/kg (hare)
Inhalative	LC50/4h	>6.82 mg/l (rat)

· **Primary irritant effect:**
· **on the eye:** Irritating effect.
· **Sensitization:** No sensitizing effects known.
· **Other information (about experimental toxicology):**
Due to high vapor pressure, a harmful concentration in the air can quickly be reached. High concentrations can produce a narcotic effect.
· **Subacute to chronic toxicity:** Not tested.

(Contd. on page 8)

(Contd. of page 7)

· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**		
13463-67-7	titanium dioxide	2B
7631-86-9	silicon dioxide, chemically prepared	3

· **NTP (National Toxicology Program)**
None of the ingredients are listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients are listed.

12 ECOLOGICAL INFORMATION

· **Toxicity**

· **Aquatic toxicity:**	
108-65-6 2-methoxy-1-methylethyl acetate	
EC50/48h	>500 mg/l (daphnia magna)
LC50/96h	100-180 mg/l (Rainbow trout)
141-78-6 ethyl acetate	
EC50/24h	3,090 mg/l (daphnia magna) (DIN 38412, Part 11)
EC50/48h	164 mg/l (daphnia magna)
	3,300 mg/l (scenedesmus subspicatus)
LC50/96h	230 mg/l (fish)
	455 mg/l (pimephales promelas)
NOEC/72h	>100 mg/l (Alge (Desmodesmus subspicatus)) (OECD 201)
NOEC/21d	2.4 mg/l (daphnia magna)

· **Persistence and degradability:** Easily biodegradable.
· **Behavior in environmental systems:**
· **Bioaccumulative potential:** No further relevant information available.
· **Mobility in soil:** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow product to reach ground water, water course or sewage system.
· **Results of PBT and vPvB assessment**
· **PBT:** Does not meet the PBT-criteria of Annex XIII of REACH (self assessment).
· **vPvB:** Does not meet the vPvB-criteria of Annex XIII of REACH (self assessment).
· **Other adverse effects:** No further relevant information available.

13 DISPOSAL CONSIDERATIONS

· **Waste treatment methods**
Hazardous waste according to Waste Catalogue (EWC). If recycling is not possible, waste must be in compliance with local regulations to be removed.

(Contd. on page 9)

Malarkey Roofing Products® Defining Excellence.™

Safety Data Sheet
acc. to OSHA HCS

Printing date 09/26/2018 Reviewed on 09/25/2018

Trade name: EZ Seal Metal Primer

(Contd. of page 8)

· **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncured product residues are special waste.
Cured product residues are not hazardous waste.

· **Uncleaned packagings:**
· **Recommendation:**
This material and its container must be disposed of as hazardous waste.
Disposal must be made according to official regulations.
· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 TRANSPORT INFORMATION

· **UN-Number**	
· **DOT, ADR, IMDG, IATA**	UN1263
· **UN proper shipping name**	
· **DOT**	Paint
· **ADR**	1263 Paint
· **IMDG, IATA**	PAINT
· **Transport hazard class(es)**	
· **DOT**	

· **Class**	3 Flammable liquids
· **Label**	3
· **ADR, IMDG, IATA**	

· **Class**	3 Flammable liquids
· **Label**	3
· **Packing group**	
· **DOT, ADR, IMDG, IATA**	III
· **Environmental hazards:**	
· **Marine pollutant:**	No
· **Special precautions for user**	Warning: Flammable liquids
· **Danger code (Kemler):**	-
· **EMS Number:**	F-E,S-E
· **Stowage Category**	A
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.

(Contd. on page 10)

Malarkey Roofing Products® Defining Excellence.™

Safety Data Sheet
acc. to OSHA HCS

Printing date 09/26/2018 Reviewed on 09/25/2018

Trade name: EZ Seal Metal Primer

(Contd. of page 9)

· **Transport/Additional information:**

· **ADR**
· **Excepted quantities (EQ)** Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml
· **Remarks:** Classification according to viscosity clause (2.2.3.1.4)

· **IMDG**
· **Limited quantities (LQ)** 5L
· **Excepted quantities (EQ)** Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml
· **Remarks:** Classification according to viscosity clause (2.3.2.3)

· **UN "Model Regulation":** UN 1263 PAINT, 3, III

15 REGULATORY INFORMATION

· **Safety, health and environmental regulations/legislation specific for the substance or mixture:**
· **SARA**

· **Section 355 (extremely hazardous substances):**
None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**

1344-28-1	aluminium oxide

· **TSCA (Toxic Substances Control Act):**

108-65-6	2-methoxy-1-methylethyl acetate
141-78-6	ethyl acetate
13463-67-7	titanium dioxide
1344-28-1	aluminium oxide
7631-86-9	silicon dioxide, chemically prepared
1314-23-4	zirconium oxide

· **TSCA new (21st Century Act) (Substances not listed):**

112945-52-5	SYNTHETIC AMORPHOUS SILICA

· **Proposition 65**

· **Chemicals known to cause cancer:**

13463-67-7	titanium dioxide

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**
None of the ingredients are listed.

· **Cancerogenity categories**

· **EPA (Environmental Protection Agency)**
None of the ingredients are listed.

· **TLV (Threshold Limit Value established by ACGIH)**

13463-67-7	titanium dioxide	A4
1344-28-1	aluminium oxide	A4
1314-23-4	zirconium oxide	A4

(Contd. on page 11)

Malarkey Roofing Products® Defining Excellence.™

Safety Data Sheet
acc. to OSHA HCS

Printing date 09/26/2018 Reviewed on 09/25/2018

Trade name: EZ Seal Metal Primer

(Contd. of page 10)

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**	
13463-67-7	titanium dioxide

· **National regulations:**

· **Information about limitation of use:**
Employment restrictions concerning young persons must be observed.
Employment restrictions concerning pregnant and lactating women must be observed.
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

* 16 OTHER INFORMATION

These figures relate to the product as delivered.

Sector of Use
Relevant identified uses of the mixture:
SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
SU19 Building and construction work
SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Uses advised against:
SU21 Consumer uses: Private households / general public / consumers

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Training hints**
Teaching about hazards and precautions is necessary for handling and use of these chemicals (Technical Rule 555). Instruction must take place before the start of employment and annually thereafter.
· **Date of preparation / last revision** 09/26/2018 / 32
· **Abbreviations and acronyms:**
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Flam. Liq. 2: Flammable liquids – Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
· **Sources**
www.gestis.de
www.echa.eu
logkow.cisti.nrc.ca
· *** Data compared to the previous version altered.**